

SCPY428 Theoretical Physics

Physics-SCMU, First Semester-2021

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Topics/References/Policy

- Lecture topics:

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| ① Special relativity | ⑧ Relativistic quantum mechanics |
| ② Relativistic dynamics of particle | ⑨ Photons and their interactions |
| ③ Relativistic dynamics of continuum | ⑩ General relativity and gravitation |
| ④ Electrodynamics theory | ⑪ Schwarzschild and Kerr gravity |
| ⑤ Electromagnetic radiations | ⑫ Aspects on black holes |
| ⑥ Magnetic monopole | ⑬ Kaluza-Klein theory |
| ⑦ EM-duality and nonlinear field | ⑭ Classical dynamics of string |

- Web page: <http://physics.sc.mahidol.ac.th/udom/scpy428.html>
- References, will be appear in the lecture note.
- Policy: homework 40%, exam-1 20%, exam-2 40%, grading: $F < 50$, $D < 55$, $D+ < 60$, $C < 65$, $C+ < 70$, $B < 75$, $B+ < 80$, $A \geq 80\%$